

ABSTRACT OF THE DISCLOSURE

5 A digital signature service integrates digital signature functions on data,  
for storage in a database. The digital signature service is integrated within a  
remote database management system ("RDBMS"). A database client generates  
a command to the RDBMS to execute a stored procedure or stored function that  
digitally signs the data and that saves the data in a persistent datastore. In  
response to the command, the RDBMS, using a digital certificate for the user,  
generates a signature from the data. In addition, the RDBMS generates a digital  
signature object for the data that includes the data, certificate and signature. The  
10 digital signature object is stored in the database. The digital signature service  
verifies digital signatures through execution of a query command. The digital  
signature service also implements business logic to retrieve data based on digital  
signature criteria, and implements filter functions to filter the storage and  
15 retrieval of data based on verification and authentication of digital signatures.  
The generation of multiple signatories on a single data item is also disclosed.